OpenIPMC

PICMG REQUIREMENTS CHECK BY POLARIS

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PICMG Requirements Tests

○ Polaris: Test IPMC conformity to IPMC controller

○ Performed and organized by Mark, Gregory and Julian at CERN

    ○ Many thanks for that!

○ Results

PASSED	FAILED	SKIPPED	TOTAL
16 (32%)	29	4	49

○ Cause of failures: Non-implemented IPMI commands or features

    ○ Not needed so far

    ○ Our Shelf Managers never requested such commands

    ○ Some features are in our roadmap (e.g. Sensor Events)

Detailed results

Req 3.3 Netfn Used by ATCA Defined Commands Response	Passed
Req 3-4 PICMG Identifier Used by ATCA Defined Commands	Passed
Req 3.5 Reserved Bits in all Commands	Passed
Req 3.15 Completion Code Returned by IPM Controller	Passed
Req 3.74 Managed FRU Represented by IPM Controller	Passed
Req 3.82 Support of Get PICMG Properties Command for IPM Controller	Passed
Req 3.88 Site Type in Get Address Info Command	Passed
Req 3.251 Support of Get FRU LED Properties Command for IPMC	Passed
Req 3.253 Support of Get LED Color Capabilities Command for IPMC	Passed
Req 3.254 Completion Code CCh in Response to Get LED Color Capabilities Command	Passed
Req 3.351 Get Device SDR	Passed
Req 3.354 FRU Device Locator Record	Passed
Req 3.355 MC Device Locator Record	Passed
Req 3.356 Sensors of IPMC and all its Managed FRU is Described in Sensor Data Record	Passed
Req 3.408 Contiguous FRU Device ID	Passed
Req 3.418 Implementation of Chassis Info Area	Passed
Req 3.2 Netfn Used by ATCA Defined Commands Request	Skipped
Req 3.34 Entity of the Version Change Sensor	Skipped
Req 3.390 Containment Relationship of Entity in Device SDRs	Skipped
Req 3.391 Top Level Containment	Skipped

Req 3.1 IPMI Request and Response Format.	Failed
Req 3.13 Invalid Completion Code for Not Applicable Commands	Failed
Req 3.17 Checking Invalid FRU Device ID in Request Data	Failed
Req 3.26 Event Receiver and LUN	Failed
Req 3.28 Event Generation in Response to Set Event Receiver Command	Failed
Req 3.46 Hardware to IPMB 0 Address Transformation	Failed
Req 3.83 Get Address Info Support for IPM Controller	Failed
Req 3.101 FRU State Support	Failed
Req 3.103 Set FRU Activation Policy Command	Failed
Req 3.138 Payload Power after Completion of Deactivation Process	Failed
Req 3.188 Implementation of Warm Reset Command for IPM Controller	Failed
Req 3.189 Operational State of IPMC and Payload Due to Warm Reset Command	Failed
Req 3.350 Sensor Device Commands	Failed
Req 3.359 IPMC Implements Physical IPMBO Sensor	Failed
Req 3.400 IPMC as Event Generator	Failed
Req 3.403 IPM Controller Sends All Events to Event Receiver	Failed
Req 3.405 FRU Inventory Device Command Support for IPM Controller	Failed
Req 3.406 FRU Information Is Available without Payload Power	Failed
Req 3.407 Primary FRU at FRU Device ID 0	Failed
Req 3.409 Entity Responsible for Updating Checksums in FRU Information	Failed
Req 3.414 Multi Records in Multi Record Information Area	Failed
Req 3.420 Board Point to Point Connectivity Record	Failed
Req 3.421 Product Info Area for Non Zero FRUs	Failed
Req 3.422 Product Info Area Identify Distinct FRU Types	Failed
Req 3.466 E-Keying Entry in Board FRU Information	Failed
Req 3.467 Get and Set Port State	Failed
Req 3.491 Multi Channel Links in Board FRU Information	Failed
Req 3.494 Link Type Values in Board FRU Information	Failed
Req 3.495 Link Type Extension Values in Board FRU Information	Failed

Bug reported!

○ During the tests, IPMC freezed after many tests, even if passed.

○ Push reset button on IPMC was needed for the next test

○ Investigation

  ○ Using IPMItool it was possible to reproduce the failure at SPRACE

Others

- OpenIPMC-HW Revision 1.1
  - Add pads for debugging
  - SImplify jumpers
- Quoting the production (20 boards)
  - Circuibras (Paraná): R$ 230,00 CADA
  - Griffus (São paulo): aguardando avaliação. Dificuldade com materiais.
- Componentes (10 placas)
  - LatereBR: Não consegue fazer venda local no momento. Apenas FOB
  - We may need to operate Polaris again with a debugger attached to IPMC